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PROFILE OF THE NIGER CREDIT UNION MOVEMENT

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ABSTRACT

The West African country of Niger is among the poorest in the world with a population that is inadequately served by the formal financial system and a declining economy with an artificial financial deepening. The establishment of the credit unions movement could become the most important financial intermediary, especially in the rural areas of the country.

The investigation of the performance of the CU movement has found the young movement to be healthy and rapidly growing as shown by PEARLS ratios, descriptive statistics, and econometric model results. Several elements remain at the core of the still growing movement and will affect its future growth. That include increase women participation, use of market rates of interest on loans, and using strictly members mobilized savings as loan sources instead of relying on external funds, generating larger loan portfolios by mobilizing more savings and increasing outstanding loans to savings ratios. These elements would prove crucial in determining the long term viability and sustainability of the CUs in Niger.

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I. INTRODUCTION

Niger, a Sub-Saharan country in the Sahel region of West Africa, has a total surface area of 1,265,000 square kilometers of which 75 percent is desert, 13 percent is semi-arid, and only 12 percent is suitable for agriculture. It is a land-locked country, which shares borders with Nigeria, and Bénin in the South, Burkina Faso and Mali in the West, Algeria and Libya in the North, and Chad in the East. The country depends to a large degree on both import and export trade with Nigeria for its economic development. Niger's population was estimated at 8.36 million people in 1993, most of whom are located within 200 km of the southern border, where there is adequate rainfall for agricultural activity (IMF statistics). The population is estimated to reach 21.3 million by the year 2025 with an annual population growth rate of 3.3 percent. Most of Niger's population (80 percent) lives in rural areas and practices agriculture or livestock rearing. However, urban areas are rapidly growing with a 6.6 percent annual growth rate that is higher than the 4.2 percent growth recorded for the rural population. The country is subdivided into eight regions or departments which are Agadez, Diffa, Dosso, Maradi, Tahoua, Tillabery, Zinder, and Niamey-commune. The major urban areas are Niamey, Maradi, Zinder, Tahoua, and Arlit. The majority of the population belongs to the Hausa ethnic group (53.6 percent), Zarma-Songhai are 21 percent, Fulanis are 10.4 percent, and Tuareg account for 9.2 percent of the population (Niger census, 1988). Almost all Nigeriens are Muslim and literacy rates rank quite low at 31 percent, with 44 percent of adult men being literate and 18 percent of literate adult women.

This introductory section is followed in section II by a review of the Niger economy including the financial markets. The performance of the Niger CU movement is assessed in section III. Concluding comments are provided in section IV.

II. THE NIGER ECONOMY

A. General Characteristics and Indicators

Niger is one of the poorest countries in the world with a Gross National Product (GNP) per capita of US $ 280 in 1992 despite its uranium resources. Niger is in fact poorer than most of its neighbors with a Gross Domestic Product (GDP) per capita twice as low as that of the average West African country. The Sahélien climate in Niger makes the country vulnerable to drastic weather conditions and especially drought. Thus, a prolonged drought in the 70s resulted in a declining GDP

between 1970 and 1980. GDP in 1991 was FCFA 665.9 billion (US $2.6 billion) and over the period 1970-82, GDP grew at an average annual rate of 4 percent. However, GDP per capita declined at an average of 0.8 percent over the same period due a higher population increase.

In the period 1980-91, GNP per capita grew at a negative rate of -0.9 percent with an inflation rate of 2.3 percent for the period. Despite structural adjustment measures by the World Bank and the IMF, Niger's economic situation has deteriorated and GNP per capita growth stayed negative at -1.8 percent during the period 1985-92 (World Bank African Development Indicators, 1995). The situation is not likely to improve soon due to a depressed international uranium market, the major foreign exchange earner for the country until the late 1980s. The next structural adjustments reform efforts will be concentrating on reducing the cost of producing uranium in Niger to improve the county's competitiveness and government finances.

Although the principal foreign-exchange earner in Niger is uranium, agriculture remains important for the country's economy as the majority of the population, up to 90 percent, derives their livelihood from agricultural related activities. Agriculture represented 38 percent of GDP in 1991, the industrial sector accounted for 19 percent, and services for 42 percent (Table 1). The agricultural sector and in particular farming in Niger is done by small holders and the principal food crops are millet, sorghum, cowpeas (niébé), and cassava of which very little is sold (less than 20 percent). The main cash crops are groundnuts, and cotton. Most farming is rainfed and depends on the rainy season from May to September. Livestock is the second most important foreign exchange earner in Niger but is highly vulnerable to drought. Thus, huge losses were incurred in livestock (mainly cattle) during the drought in 1984 but numbers have risen again with the intermittent return of the rains in 1985 and thereafter. Due to Niger's ecological and demographic constraints, the government has not been able to launch intensive commercial livestock operations.

Table 1: Sectoral Components of GDP in Niger's Economy

	1986		1991	
	Value in billion FCFA	Percent share in GDP	Value in billion FCFA	Percent share in GDP
1. Agriculture	237.9	37.0	247.4	38.4
2. Industry	141.8	22.0	125.2	19.4
Manufacturing	49.3	7.7	53.9	8.4
3. Services	263.7	41.0	271.7	42.2
Total GDP	643.4	100.0	644.3	100.0

Source: World Bank, World tables, 1995.

The industrial sector is dominated by mining and uranium in particular which provides Niger with most of its foreign exchange. Uranium accounted for close to 75 percent of export earnings in 1989 (EIU, 1994). Uranium exports have fallen in recent years due to a depressed world market and uranium currently finances 8 percent of the national budget compared to 40 percent in 1979. The manufacturing sub-sector in Niger is still small and concentrated around the processing of agricultural products, such as, oilseeds, rice, cotton, and livestock products.

The services sector and especially tourism has been disrupted by the Tuareg rebellion in the Northern area of Agadez. However, the latest peace accord between the government and the rebels, reached in early 1995, should improve the situation in the near future and revive a one-time dynamic tourism sector. That should also have positive repercussions on the whole economy.

B. THE FINANCIAL SYSTEM IN NIGER

1. Formal and Informal Finance in Niger

Niger is a member of the West African Monetary Union, the Union Monétaire Ouest Africaine (UMOA) and uses the CFA franc (FCFA) for currency.[1] The CFA franc is pegged to the French Franc (FF), with a fixed parity rate of 100 FCFA per 1 FF after the devaluation of the currency which occurred in January 1994.[2] The formal financial sector in Niger is made up of a Central Bank, i.e., the Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO)[3], a few commercial banks, and insurance companies. The history of the banking sector in Niger is riddled with failures of financial institutions one after the other and the picture of the formal financial sector today is not very different from that of the late 1980s, when Niger lacked an institutional system of financial intermediation (Graham et al., 1987). The existing commercial banks in Niger still have a high urban bias. They are all located in Niamey, the capital and have just a few or no branches in rural areas of the country. The policies of the BCEAO put a ceiling on the amount of credit by bank, a ceiling on interest rates for loans[4], and offered a rediscount facility to banks to finance credit with central bank monetary creation instead of through deposit mobilization. All these policies encouraged banks to limit their services to a narrow customer base. Thus, the Nigerien formal financial system is characterized by a nominal growth of monetary aggregates that has not lead to a comparable increase in loans. In fact, overall credit to the economy has been declining despite a

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[1] UMOA includes seven Francophone West African countries: Bénin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Sénégal, and Togo.

[2] The CFA Franc was pegged to French Franc for 26 years (since 1948) at FF 1 = FCFA 50 before the devaluation.

[3] BCEAO is a regional bank with headquarters in Dakar, Sénégal and agencies in each UMOA member state.

[4] BCEAO interest rate policy on loans sets an usury rate to be applied by banks which is twice the rediscount rate. However, BCEAO has began a restructuring of its procedures including its interest rate policies.

growth in deposits (Table 2). The excess reserves of banks were used instead to purchase other assets or were placed with the BCEAO. The ratio of money plus quasi money over GDP has increased from 13.40 to 19.97 percent which would indicate modest financial deepening of the economy between 1974 and 1993 (World Bank, 1994). However, these indicators, the lowest among all other Francophone African countries, reflect an artificial deepening caused by the combination of excess liquidity in the financial market and decreasing GDP.

Table 2: Five-Year Averages of Financial Indicators for the Niger Economy from 1974-1993 (in Percentages).

Periods	Demand Deposits/Total Liabilities	Time deposits/ Total liabilities	Claims on private sector/ Total assets	Real lending rate	Real deposit rate	Gross margin	Inflation rate
1974-78	34.88	11.16	79.01	-4.92	-6.69	1.33	14.21
1979-83	28.14	11.00	79.33	0.07	-2.72	2.79	10.23
1984-88	24.99	21.32	67.77	15.11	8.78	6.33	-2.49
1989-93	20.74	28.23	55.54	19.44	10.19	9.25	-2.19

Source: The World Bank.

The only financial system which served the rural sector via branches throughout the country was a high cost agricultural input delivery system run by the Niger Union of Credit Cooperatives (UNCC) and the Agricultural Credit Bank (CNCA). Neither of these entities engaged in real financial intermediation between borrowers and savers. The CNCA activities resulted in a truncated credit delivery system which provided loans to farmers to purchase agricultural inputs and implements through the use of central bank and external donor lines of credit. The CNCA never attempted to mobilize savings on a large scale, limiting its deposit accounts to those of large donors, irrigated perimeter cooperatives, government parastatals, and a limited number of other cooperatives supported by Non Governmental Organizations (NGOs) and/or other donors. The other financial institution which offered much needed deposit services to the rural population was the postal system in Niger represented by the Caisse Nationale d'Epargne (CNE) with 46 branches throughout the country. The now moribund CNE coupled with the liquidation of the CNCA in 1986 created a vacuum that NGOs and other donors felt compelled to fill.

These still emerging entities form today the bulk of the semi-formal financial sector in Niger. However, NGOs and donors operate with different and sometimes conflicting approaches to financial intermediation. These practices include programs or projects dealing with both savings and credit, targeted credit programs with credit delivery as the major and only activity, and programs that make loans and engage in credit as a secondary activity, i.e. part time credit programs. The credit union (CU) movement is the only savings and loan program that stress a savings mobilization-first approach and do not rely on donor funds for on-lending activities. On the other hand, the informal

financial system in Niger is still vibrant and is comprised of the array of neighbors, friends and family, as well as traditional money keepers and money lenders and rotating savings and credit associations (ROSCAs) called tontines. Savings in the informal sector are undertaken primarily through tontines which are usually women's groups while informal loan activities are carried out primarily by friends, family members, and traditional money keepers. Informal loans are usually short term, and carry no interest when granted by family members. However, the traditional money lender, usually a trader, may charge very high interest rates on small, short term loans. Most loans by informal agents have flexible repayment schedules and can be rescheduled easily. That flexibility in loan contracts and other still unmatched services explain why the informal sector remains dynamic especially in rural Niger.

The central bank (BCEAO) has been blamed for discouraging the emergence of other financial intermediaries capable of competing with banks through inflexible interest rate policies and high barriers to entry for new banks and non-bank financial institutions. However, the BCEAO's recent restructuring of its rules and regulations should provide UMOA countries and Niger in particular with the tools to fill the missing middle created by the formerly stringent banking regulations. It is doubtful that targeted credit programs and guarantee fund programs with no savings mobilization objective are viable and sustainable in the long-run. The CU program that offers both savings and loan services and relies strictly on mobilized funds offers the most promise to Niger's population. With the proper prudential and regulatory framework, and a carefully monitored growth, CUs in Niger could become the most sustainable financial intermediaries, especially in the rural areas of the country where banks are virtually non existent.

2. Financial Deepening in Niger

An important indicator of the growing complexity of an economy is the degree of financial sophistication and the spread of financial market instruments. This is commonly measured by examining the growth of money aggregates and the ratio of money to GDP, the velocity of money and the relationship between currency and deposits.

The relevant data for a five year period 1974-1993 are reported in Table 2 and Table 3. The data show that the claims on private sector have declined over time from 79.01 percent in 1974-78 to 55.54 percent in 1989-93. One reason could be the write-off of several loans after numerous bank failures in the 1980's and early 90s. The rise in real lending rate from -4.92 to 19.44 could also be another reason why bank claims on private sector declined. The decline in demand deposits from 34.88 percent to 20.74 percent on the one hand and rise in time deposits from 11.16 to 28.23 percent on the other hand could be attributed to real interest rates on deposits going up from a negative 6.69 percent to 10.19 percent. Bank margins saw an increase from 1.33 to 9.25 from an overly liquid formal financial sector which made fewer loans to the private sector despite a continued increase in time deposits (Table 2).

The ratio of money plus quasi money over GDP has increased from 13.40 to 19.97 percent which would indicate some financial deepening of the economy but that was an artificial deepening

caused by the combination of excess liquidity in the financial market and decreasing GDP. In fact, the financial deepening indicator for Niger is the lowest among several other Francophone African countries (Table 3).

Table 3: **Financial Deepening Measures for Niger and Selected Francophone African Countries: 1974-1993.**

Country	% Quasi Money of GDP	% Money plus Quasi-Money of GDP
Gabon		
1974-78	3.46	17.06
1979-83	6.32	17.62
1984-88	8.80	21.13
1989-93	7.33	19 44
Cameroon		
1974-78	6.47	22.83
1979-83	8.62	24.39
1984-88	10.44	22.96
1989-93	8.96	18.56
Côte d'Ivoire		
1974-78	8.50	31.52
1979-83	7.30	27.09
1984-88	10.19	29.22
1989-93	11.22	28.41
Senegal		
1974-78	25.61	25.61
1979-83	29.48	29.48
1984-88	25.29	25.29
1989-93	25.01	25.01
Zaire		
1974-78	4.71	29.47
1979-83	2.62	21.01
1984-88	1.54	17.70
1989-93	1.91	12.94
Niger		
1974-78		
1979-83	2 46	13.40
1984-88	5.37	17.34
1989-93	7.80	19.87
Burkina Faso		
1974-78	3.15	19.23
1979-83	4.65	19.64
1984-88	5.83	22.11
1989-93	--	--

Source: The World bank.

The Nigerien formal financial system is characterized by a nominal growth of money aggregates that has not lead to a comparable increase in loans. In fact, overall credit to the economy has been declining despite a growth in deposits. The excess reserves of banks were used instead to purchase other assets or were placed with the central bank, BCEAO. The policies in BCEAO that put a ceiling on amount of credit by bank, a ceiling on interest rates on loans[5], and offers a rediscount facility to banks to finance credit with central bank monetary creation instead of savings mobilization certainly encourages banks to limit their services to a narrow customer base.

III. ASSESSMENT OF THE NIGER CREDIT UNION MOVEMENT

A. THE CREDIT UNION MOVEMENT IN THE WORLD

1. History of the Credit Union Movement

Credit unions (CUs) are thought to have originated in Germany with the advent of the Raiffeissen societies in the nineteenth century. Friedrich W. Raiffeissen created the cooperative credit institutions to help the poor and the needy and as a charitable organization. As they became more self-help oriented, the credit societies grew rapidly throughout Europe to give rise to the credit union movement as is known today throughout the world.

The World Council of Credit Unions (WOCCU) is the worldwide representative organization of CUs and similar cooperative financial institutions. Members of WOCCU include seven regional and national credit union confederations serving Africa[6], Asia, Australia, Canada, the Caribbean, Latin America, and the United States. There are four free-standing leagues representing Fiji, Great Britain, Ireland and New Zealand. For its developing country members, e.g. Niger, WOCCU provides technical and development services, including the design and implementation of long-term programs in institutional development, short-term technical assistance and training projects, and assistance in mobilizing human and financial resources.

WOCCU estimates that there are 37,078 CUs in the world, with a membership of more than 88 million people, with a penetration rate of 5.13 percent[7] (WOCCU, 1994 statistical report). Savings are estimated at US $ 377.7 billion, loans at US $ 250 billion, reserves at US $13.8 billion and assets at US $ 418.4 billion. In developing countries, credit unions play a significant role in urban and rural financial markets where the majority of the population is not served by the formal

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[5] BCEAO interest rate policy on loans sets an usury rate to be applied by banks which is twice the rediscount rate. However, BCEAO has began a restructuring of its procedures including the interest rate policies.

[6] The African Confederation of Cooperative Savings and Credit Associations (ACCOSCA) comprises 28 countries.

[7] Population penetration is based on working age population of WOCCU member countries.

sector. In Africa, Credit unions are estimated at 5,143 organizations, with 2.8 million members, US $432.5 million in savings, and US $252 million in assets.[8] The penetration rate is at 1.48 percent for African credit unions. Credit union strategy in developing countries focusses primarily on the savings mobilization first approach whereby accumulated local savings is granted as loans to members-savers instead of relying on outside funding. By generating local resources, CUs have the ability to become one of the most important source of financial resource for farm household as well micro and small scale entrepreneurs.

The credit union structure is based on a democratic structure where the members are the owners, and cooperation and social responsibility are key operating principles. Credit unions are member-owned, member-operated, non-profit organizations that operate as cooperative financial organizations. The primary objective of a credit union is to provide safe and efficient savings and loan services to its members at a reasonable cost (Dublin, 1966). Credit unions are organized under rules and regulations that are fairly uniform wherever they exist. They are democratically-run institutions based on the principle of one-person, one-vote and have a common bond that link members. In open-bond or community based CUs, members are from the same community, village, or residence area. In occupational or closed-bond CUs, members belong to the same profession, or are engaged in the same occupation. Thus, occupational CUs have a more homogeneous membership than community based credit unions.

Credit unions mobilize savings and provide loans to their members only.[9] The member share of a CU is crucial in determining eligibility and size of loan. Credit union members have a right to a multiple of their share, frequently two to one (2:1). At times, deposit accounts in some CUs are used (in addition to shares) as the basis to establish the loan multiple. There is also usually a formal limit on the size of a single loan in a credit union.

The credit union governance structure is characterized by a one-person one-vote rule, implying that voting powers cannot be accumulated by any individual regardless of how many shares they own. Managers of CUs are responsible for the day to day decisions, while the ultimate control of the organization belongs to the general assembly of members-owners. The owner-client structure of CUs can create conflicts among borrowers, savers, and management. Opposition among net borrowers and net savers for control of the institution can lead to a borrower-dominated or saver-dominated credit union.[10] Individual's share capital cannot be traded or sold to others outside of the

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[8] These statistics do not include those of Niger which is not yet member of the African Confederation (ACCOSCA).

[9] In some Latin American countries e.g. Costa Rica, credit unions provide services to non-members also. This is an attempt to mobilize savings from potential large depositors who are not interested in becoming CU members or paying an entree fee.

[10] In a borrower-dominated credit union, a small segment of the membership, net borrowers, capture control of the CU to obtain private benefits at the expense of the other members, the net savers (Smith et. Al, 1981).

credit union. The member gets restitution of his/her shares upon resignation from the credit union. The return on share capital is quite limited in a credit union and most often, the organization pays dividends by distributing profits made by the institution to members or in a form of interest rebates on loans. Credit unions place their excess liquidity with other financial institutions or with the Central Finance Facility (CFF) if one exists. Most often, the CFF is a federation of all credit unions in the system and plays the role of financial intermediary between surplus units and deficit units. The CFF lends directly to credit unions against a fee and is in charge of searching the best investment alternatives for the liquidity it manages.

B. THE CREDIT UNION MOVEMENT IN NIGER

1. Institutional Profile of the CUs in Niger

In response to recommendations by a research team from The Ohio State University in 1986-87, WOCCU started a pilot project of CUs in Niger. The study by the Ohio State University found that there were no formal financial institutions outside of the main urban areas of Niger such as Niamey. Rural households, thus, had to rely almost exclusively on informal financial intermediaries for financial services. The project of credit unions or Caisses Populaires d'Epargne et de Crédit (CPECs) as they are known in Niger started in the department of Zinder in 1990. The first three-and-a-half years of pilot phase, from 1989 to 1991, were used to develop and promote CUs in the Zinder department where 11 CPECs were created during that period. In its current phase, the objective of the project funded by USAID is to promote and extend CU development in other departments such as Maradi, Niamey in addition to Zinder. One specific objective is to create 85 CPECs and reach 8,000 members by August 1997, accumulate FCFA 119 million (US $148,000)[11] in savings, and FCFA 74 million (US $256,000) in loans, and FCFA 128 million (US $238,000) in assets. As of December 1994, there were 37 CPECs in the departments of Maradi, Niamey, Kollo and Tillabery. The project will continue to promote new CUs and provide support services to them, create a representative body, and establish a service association staff and physical infrastructure that will be transferred to a national service association at an appropriate time.

a. Internal Regulations and Operational Philosophies

Credit Unions in Niger function according to the basic operating principles set out by WOCCU for all its affiliated organizations. There are nine principles grouped under three categories:

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[11] The exchange rate was US $1=FCFA 500 after the devaluation of the currency which occurred in January 1994.

- (i) Democratic structure
  Open and voluntary membership
  Democratic control
  Non-discrimination

- (ii) Services to members
  Services to members
  Distribution to members
  Building financial stability

- (iii) Social goals
  On-going education
  Cooperation among cooperatives
  Social responsibilities

These principles give CUs an almost uniform structure and also provide them with the flexibility to adapt to their specific environment.

b. Membership Growth

Membership policies in the CPECs remain simple and affordable. Minimum membership fee requirements are FCFA 2500 in rural areas and FCFA 3500 or higher in urban areas.[12] Some rural CPECs even allow the membership fee to be paid in small increments. The membership fee includes a minimum deposit amount of FCFA 500 which buys a member a share. In general, everyone is welcome as a member regardless of sector of activity. Services offered to members include savings as well as credit. All CPEC members are depositors first and foremost. As the membership grows, so is the number of depositors and thus the deposit amount that is later granted as loans. Thus, the amount of loans granted is highly dependent on the amount of savings mobilized each year.

Membership growth in the CPECs is shown in Table 4. As of March 31, 1995, there were 5390 members (3711 men, 1617 women, and 62 institutional accounts) in 38 CPECs in operation. Membership has been growing at an average of more than a 100 percent per year between 1991 and March 1995. The number of CPECs grew from 5 in December 1991 to 37 in December 1994 with an average of 10 additional CPECs created every year. With an objective to create 85 CPECs by 1997, that would require the creation of 48 new CPECs within the next 3 years including 1995, i.e., an average of 15 CPECs every year. However, the objective of reaching 8,000 members by August 1997 might become a reality sooner than expected (end of 1995) if the annual membership growth rate of 100 percent is maintained. Only a few CPECs are gender-based and there were six all-female CUs, three all-male CUs, and the rest was gender-mixed CUs. Membership growth by gender is reflected is Table 5 with men representing 68 percent of the membership, women 30.7 percent, and

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[12] The highest membership fee was registered in Yancin Kai (USAID CPEC) with FCFA 9500 requirement.

groups 1.2 percent. The all-female CPECs represent more than 44 percent of the female membership in the organization.

Table 4: Number and Growth of Credit Unions in Niger, 1990-1995

Date	Total CUs	Zinder	Maradi	Niamey	Tillabery	Dosso	Increase (%)
12-31-90	5	5	--	--	--	--	--
12-31-91	5	5	--	--	--	--	0.00
12-31-92	11	10	--	1	--	--	120
12-31-93	20	13	6	1	--	--	82
12-31-94	37	14	14	7	1	1	85
3-31-95	38	14	15	7	1	1	2.70

Source: WOCCU/Niger data base.
-- Not applicable.

Table 5: Credit Union Membership Composition and Growth by Gender, 1990-1995

Date	Men	Women	Groups	Total Members	% Men	% Women	% Groups	Total %
12-31-90	453	57	3	513	88.3	11.1	0.2	100
	--	--	--	--				
12-31-91	476	73	4	553	86.1	13.2	0.7	100
	(5.07)	(28.07)	(33.33)	(7.80)				
12-31-92	691	280	8	979	70.6	28.6	0.8	100
	(45.17)	(283.56)	(100.00)	(77.03)				
12-31-93	1,554	496	26	2,076	74.9	23.9	1.2	100
	(124.89)	(77.14)	(225.00)	(112.05)				
12-31-94	3,293	1,486	59	4,838	68.1	30.7	1.2	100
	(111.90)	(199.60)	(126.92)	(133.04)				
3-31-95	3,711	1,617	62	5390	68.4	30.0	1.5	100
	(12.69)	(8.82)	(5.08)	(11.41)				

Source: WOCCU/Niger data base.
Note: Rate increases in percent are in parentheses.
-- Not applicable.

c . CPEC Savings Flows

Growth in mobilized savings over time is shown in Table 6. As of December 31, 1994, the CUs in Niger had accumulated FCFA 88.4 million in savings deposits, and FCFA 130.2 million in assets, thus surpassing the target set for 1997. Savings increased from FCFA 1 million in 1990 to CFA 88.4 million in 1994. A savings growth of 406.5 percent was recorded in one year, i.e., from 1993 to 1994 when CU membership grew from 2,076 to 4,838 members. By March 1995, total deposit amount reached FCFA 118.5 million, i.e., an increase of 34 percent over a three month period and despite the devaluation of the currency that took place in early 1994. At this point, only one type of deposit account is available to CPEC members. It earns no interest except for the dividend that is paid at the end of the year in case of profit. There is also a lottery that rewards the best saver of the year. There is a definite need for term deposit accounts which would pay competitive rates of interest and attract potential net savers. It would also allow the management to manage liquidity better.

Table 6: Growth in Credit Union Assets, Deposits and Shares, 1990-1995 (FCFA)

Date	Total Assets	Total Savings Deposits	Total Shares	% Growth Assets	% Growth Deposits	% Growth Shares
12-31-90	2,737,440	1,052,050	517,250	--	--	--
12-31-91	4,118,585	2,387,520	553,825	50.4	126.9	7.1
12-31-92	11,808,619	7,150,984	1,282,535	186.7	199.5	131.6
12-31-93	27,790,082	17,454,522	2,635,785	135.3	144.1	105.5
12-31-94	130,277,500	88,407,578	5,832,715	368.8	406.5	121.3
3-31-95	159,984,748	118,504,987	6,600,780	22.80	34.04	13.17

Source: WOCCU/Niger data base.
-- Not applicable.

d . CPEC Credit Flows

General credit policies are similar in all CPECs and more stringent during the first year in which the CPEC engages in credit activities:

- Minimum deposit of FCFA 5000 is required to apply for a loan
- At least three months of membership is required
- A member has a right to a loan multiple equivalent to a multiple of his/her deposit (frequently 2:1).
- A co-signor who is also a member is required for any loan and must have sufficient funds to cover the entire amount of the loan.

After a year of activity, CPECs can revise their loan policies. Thus, loan multiple can change from 2:1 to 3:1. Most CPECs also find the co-signor requirement too restrictive and revise their loan policies after a year of activities to include accepting tangible collateral. At this point, different CPECs accept land as a collateral, property and other physical assets. In women CPECs, gold jewelry and woven clothing materials are also accepted as collateral. In the second year of loan granting collateral should cover 75 percent of the loan, and 50 percent should be covered in the third year and beyond. The required collateral needs to be a credible threat for contract enforcement and by accepting more tangible collateral, the CPECs are taking more risks and would need to monitor their loans more closely to avoid any rise in delinquent loans or default.

Loans are granted for a variety of purposes defined by each CPEC and fungibility makes it hard to trace any uses of loans. What is important for the CPECs loan committee is to make sure the borrower is credit worthy and that the required collateral discourages any loan default i.e. acts as a credible threat. Loan characteristics are fairly similar across CPECs:

- **Size of the Loan**: The maximum amount that can be granted to a single member depends on the CPEC and varies from FCFA 100,000 to FCFA 1 million. In some CPECs, not more than 10 percent of the available loanable funds can be given as loan to a single individual. For example, if the CPEC has FCFA 1 million available as loanable funds, the maximum granted to a single individual would be FCFA 100,000. In general, 70 percent of the members' deposits constitute the CPEC loanable fund amount. The rest is kept as reserves. In case of liquidity shortage, all loan activity is stopped until more outstanding loans are repaid. There has been instances of credit amount rationing due to a lack of funds in some credit unions. Quantity rationing may also occur for the same reason as priority is given to smaller loan applicants after a liquidity shortage. That could encourage some members to demand smaller loan amounts. However, some CPECs (women CPECs) are experiencing a rather low loan activity and are encouraging their members to borrow more so that the CPEC can earn more interest income.

- **Cost of a Loan**: All loans carry a 2 percent per month interest rate on the outstanding amount due. Most loans usually require installment payments of principal plus 2 percent each month. Penalties (2 percent of principal due) is applicable in case of late payment. In special cases, loans (loans for cattle rearing for example), repayment of principal is due only at the end of the loan term (5-7 months) with interest payments still due every month.

- **Term Structure of a loan**: The average length of a loan has been determined to be five months. The majority of loans never exceeds a year and in some CPECs, the maximum term is six months.

Credit unions started granting loans in 1992 and went from 68 to 184 loans in 1993. During the year 1994 alone, all 37 CPECs had granted 1235 loans to a total of 4838 members for a total amount of FCFA 93.3 million, i.e., an average loan size of FCFA 75,000. The year 1995 seems to be following a similar trend and for three months of activities in 1995 (January - March), 38 CPECs

have granted 440 loans amounting to close to FCFA 33 million. The years 1992 and 1993 have seen smaller loan averages of FCFA 30,000 and FCFA 42,000 respectively. As more CPECs are created in active urban areas and more funds are mobilized, people will probably demand larger loans as the figures already predict. The number of members receiving loans has increased from 9 percent of the membership in 1993 to 25 percent in 1994. Also, there has been a remarkable increase in the loan to savings ratio from 8.7 percent in 1992 to 11.7 percent in 1993 to 48.6 percent in 1994.

Total loan outstanding amount was FCFA 50.1 million in March 31, 1995 with an excellent loan recovery record of close to 100 percent. However, there has been some arrears in payment of FCFA 7,277,743, i.e., 14.5 percent of all due loans were between one and 12 months late with 5.6 percent between six and 12 months late (Table 7). Although there is no loans more than a year overdue, the presence of overdue loans should be taken into account by the CU managers now to avoid any future problem. Credit union started making provision for loan losses in 1993 and provision for loan losses was FCFA 1,445,253 in March 1995, i.e., 2.9 percent of total loan amount in arrears. Ideally, loan loss provision should be 35 percent of loans delinquent for up to 12 months. The provision becomes 100 percent of all loans delinquent for more than a year.

Table 7: Time Profile of Loans Granted, Repaid, and Arrears in the CUs (1990-1995)

Date	Number of Loans	Loan Amount in CFA	Out-standing Loan Amount	Loan Amount Not in Arrears in %	Loan Amount 0-2 Months in Arrears in %	Loan Amount 2-6 Months in Arrears in %	Loan Amount 6-12 Months in Arrears in %
12-31-90	0.00	0.00	0.00	0.00	--	--	--
12-31-91	0.00	0.00	0.00	--	--	--	--
12-31-92	68	2,016,500	6,618,890	60.6	19.4	17.8	2.2
12-31-93	184	7,806,500	2,043,245	67.4	16.1	16.3	0.2
12-31-94	1,235	93,309,950	42,944,596	72.1	22.6	5.3	0.00
3-31-95	440	32,863,040	50,189,344	85.50	10.12	3.58	0.81

Source: WOCCU/Niger data base.
Note: Growth rates in percent are in parentheses.
-- Not applicable.

2. Profile of CPECs Visited by the Research Team

The research team collected information on a total of 16 CPECs in the 10 villages and towns where individual surveys were being carried out.[13] Five of the CPECs had an all-female membership,

[13] See Chapters three and four for the results of the surveys.

three CPECs were male, and eight were mixed, i.e., admitted both men and women as members. In addition to the information obtained from the loans and savings records, a short questionnaire was administered to CPEC managers to get more insight about the operation of their particular credit union.

The oldest of the CPECs visited by the research team have been in operation since March 1989, while the youngest have been granting loans for about a year at the time of the survey in April-May 1995 (Table 8). Only one CPEC (Dan Balhadi from Kantché) had not yet granted any loans to its member due to insufficient funds.

Table 8: General Characteristics of the Credit Unions Visited by Research Team

Credit Union	Village/ Town	Department	Nature	Began Operation	Member-ship Size	Number of Men	Number of Women	Number of Groups
Yal Waré	Matameye	Zinder	Female	07-04-92	--	--	--	--
Kaura	Matameye	Zinder	Male	07-31-93	133	133	0.00	0.00
Tadali	S/broum	Zinder	Male	03-18-90	227	227	0.00	0.00
Tarana	S/broum	Zinder	Female	03-18-90	121	0.00	121	0.00
Mahaman Kunkuru	Dungas	Zinder	Mixed	10-05-92	115	90	23	2
Dan Balhadi	Kantché	Zinder	Male	06-03-92	--	--	--	--
Bantuntuma	Kantché	Zinder	Female	05-01-92	--	--	--	--
Ainahi	Zinder	Zinder	Mixed	10-23-93	--	--	--	--
Hangen Nesa	Roubassao	Maradi	Mixed	10-30-93	148	130	18	0.00
Anfanin Kowa	Gabi Mayaki	Maradi	Mixed	12-04-93	144	96	47	1
Mintinci	Maradi	Maradi	Female	05-08-94	114	0.00	114	0 00
Anfanin Gobir	Tibiri	Maradi	Mixed	10-23-93	158	98	67	2
Anfanin Kai de Zaria	Maradi	Maradi	Mixed	08-14-93	386	370	16	4
Adaka Albarkanta	Niamey	Niamey	Mixed	02-19-94	155	73	79	3
Diyauci	Niamey	Niamey	Female	05-15-94	160	0.00	159	1
Yancin Kai	Niamey	Niamey	Mixed	08-19-92	131	96	35	0.00

-- Not applicable.
Source. CPECs files

Table 9: Loan Characteristics by Gender in the Credit Unions Visited

Credit Union	Village/Town	Department	Nature	Mean Loan Amount	Total Number of Loans	Mean Men Loan Amount	Number of Male Loans	Mean Women Loan Amount	Number of Female Loans
Yal Waré	Matameye	Zinder	Female	82,069	72	na	0 00	82,069	72
Kaura	Matameye	Zinder	Male	138,579	69	138,579	69	na	0
Tadali	S/broum	Zinder	Male	74,553	114	74,553	114	na	0
Tarana	S/broum	Zinder	Female	29,413	63	na	0 00	29,413	63
Mahaman Kunkuru	Dungas	Zinder	Mixed	77,729	48	79,400	45	52,667	3
Dan Balhadi	Kantché	Zinder	Male	--	--	--	0 00	--	--
Bantuntuma	Kantché	Zinder	Female	24,073	68	na	0 00	24,073	68
Ainahi	Zinder	Zinder	Mixed	193,246	140	194,908	103	188,622	37
Hangen Nesa	Roubassao	Maradi	Mixed	54,881	101	56,958	96	15,000	5
Anfanin Kowa	Gabi Mayaki	Maradi	Mixed	45,790	69	48,603	63	16,250	6
Mintinci	Maradi	Maradi	Female	345,000	8	na	0 00	345,000	8
Anfanin Gobir	Tibiri	Maradi	Mixed	79,750	20	92,333	15	42,000	5
Anfanin Kai de Zaria	Maradi	Maradi	Mixed	340,174	46	340,174	46	0 00	0 00
Adaka Albarkanta	Niamey	Niamey	Mixed	48,611	18	46,818	11	51,428	7
Diyauci	Niamey	Niamey	Female	69,480	25	na	0 00	69,480	25
Yancin Kai	Niamey	Niamey	Mixed	92,758	190	88,819	166	120,000	24
Total	--	--	--	101,985	1,051	113,367	728	76,333	323

-- Not applicable
Source CPECs files

Table 10: Highest Loan Concentration in the Credit Unions Visited

Credit Union	Village	Department	Nature	Number of Loans	Size of Loan Portfolio	Mean Loan Amount	Number of Large Loans (10% of Number of Loans)	Value of Large Loans	% of Loan Portfolio
Yal Waré	Matameye	Zinder	Female	72	5,909,000	82,069	7	1,450,000	24 5
Kaura	Matameye	Zinder	Male	69	9,562,000	138,579	7	2,190,000	22 9
Tadali	S/broum	Zinder	Male	114	8,499,000	74,553	11	3,260,000	38 3
Tarana	S/broum	Zinder	Female	63	1,853,000	29,413	6	660,000	35 6
Mahaman Kunkuru	Dungas	Zinder	Mixed	48	3,731,000	77,729	5	1,750,000	46 9
Dan Balhadi	Kantché	Zinder	--	--	--	--	--	--	--
Bantuntuma	Kantché	Zinder	Female	68	1,637,000	24,073	7	450,000	27 5
Ainahi	Zinder	Zinder	Mixed	140	27,054,500	193,246	14	8,000,000	29 6
Hangen Nesa	Roubassao	Maradi	Mixed	101	5,543,000	54,881	10	1,970,000	35 5
Anfanin Kowa	Gabi Mayaki	Maradi	Mixed	69	3,159,500	45,790	7	1,084,500	34 3
Mintinci	Maradi	Maradi	Female	8	2,760,000	345,000	1	1,000,000	36 2
Anfanin Gobir	Tibiri	Maradi	Mixed	20	1,595,000	79,750	2	600,000	37 6
Anfanin Kai de Zaria	Maradi	Maradi	Mixed	46	15,648,000	340,174	5	4,500,000	28 6
Adaka Albarkanta	Niamey	Niamey	Mixed	18	875,000	48,611	2	250,000	28 6
Diyauci	Niamey	Niamey	Female	25	1,737,000	69,480	3	300,000	17 3
Yancin Kai	Niamey	Niamey	Female	190	17,624,000	92,758	19	6,000,000	34 0
Total	--	--	--	1,051	107,190,000	101,985	105	33,464,500	31 2

There was no information on loan duration from Yancin Kai/USAID CPEC due to poor record keeping
-- Not applicable.
Source: CPECs files.

The analysis of the loan records for all loans granted since the opening of each CPEC revealed that a total of 1051 loans have gone out to members thus far with an average loan size of FCFA 101,985 (Table 9). Men received a total of 728 loans at an average FCFA 113,367 and women received 323 loans with an average of FCFA 76,333 (Table 9). Thus, the average male size loan is 1.5 times larger than the average female loan. Also, women demand loans for a considerably shorter period of time than men. However, both men and women usually demand credit for about five months on average.

The total size of the loan portfolio for all 1051 loans was FCFA 107,190,000 yielding an average loan size of FCFA 101,985 (Table 10). However, the CPECs made a few very large loans, with FCFA 1,000,000 being the largest amount granted for a single loan. Considering 10 percent of the total number of loans granted at very large amounts, the total sum disbursed for the largest loans reached FCFA 33,464,500 representing an average of 31.2 percent of the total loan portfolio. Most credit unions in the sample were very close or below that average when it came to granting very large loans. The only exception was Mahaman Kunkuru credit union of Dungas in Zinder department whose value of large loans reached 47 percent of the total loan portfolio and represented only five loans out of a total of 48 loans granted. So few loans being concentrated in a hand of so few people leave the credit union at the mercy almost of a handful of members, and this is a situation that should be avoided for the well being of the association.

Fortunately, the credit unions in the sample, at the image of the whole credit union movement in Niger, have been very successful in loan repayment, being close to 100 percent repayment rate, although arrears are more common and should be monitored carefully. All CPECs are still young and have not had any big problems with loan recovery. But as credit policies change and the CPECs grant more loans and accept other forms of collateral than the traditional co-signor guarantee, the credit committee role would become crucial to avoid any rise in loan delinquency or default.

C. CPECs FINANCIAL PERFORMANCE

1. Credit Union Financial Ratios

a . PEARLS and CU Rating

Banks use CAMEL (**C**apital adequacy, **A**sset quality, **M**anagement quality, **E**arnings record, and **L**iquidity position) to assess the performance of the institution and that rating system, although excellent, is not adapted to the special nature of cooperative type institutions. The credit union performance rating system is based instead on PEARLS (**P**rotection, **E**ffective financial structure, **A**sset quality, **R**ate of return and costs, **L**iquidity, and **S**igns of growth). The PEARLS system uses 36 financial ratios to assess the viability of the CU as a cooperative financial institution (see Table 11). Due to the young age of the Niger CU movement, not all 36 ratios could be obtained and the available ratios are presented in Table 12. The principal purpose of a financial ratings system is to provide information for both comparative and regulatory purposes. A rating system permits early detection of emerging problems and can therefore indicate measures that are needed to improve the

safety and soundness of a CU. Some ratios are better indicators than others of the future of the institution and are able to provide sufficient information to managers to quickly evaluate the financial viability of the association. These key ratios included in Table 12 are discussed below:[14]

Table 11: List of PEARLS Ratios

P = Protection	
P_1	Provision for Loan Losses/Delinquency >12 months
P_2	Provision for Loan Losses / Total Delinquency
E = Effective Financial Structure	
E_1	Loans / Total Assets
E_2	Stocks and Bonds Investments / Total Assets
E_3	Other Investments / Total Assets
E_4	Liquid Cash Investments / Total Assets
E_5	Deposits / Total Assets
E_6	External Borrowing / Total Assets
E_7	Shares / Total Assets
E_8	Institutional Capital / Total Assets
A = Asset Quality	
A_1	Total Loan Delinquency / Total Loan Portfolio
A_2	Non-performing Assets in Liquidation / Total Assets
A_3	Annual Loan Charge-offs / Average Loan Portfolio
A_4	Accumulated Recoveries from Charged-off Loans/Accumulated Loans Charged-off
A_5	Non-earning Assets / Total Assets
A_6	Institutional Capital + Zero Cost Liabilities / Non-earning Assets
A_7	Financial Stabilization Counterpart (Stabilization Fund)
R = Rates of Return and Cost	
R_1	Total Loan Income / Average Loan Portfolio
R_2	Total Liquid Cash Investments Income / Average Liquid Cash Investments
R_3	Total Stock & Bond Investment Income / Average Stock & Bond Investment
R_4	Total Other Investment Income / Average Other Investment Income
R_5	Total Interest Cost on Savings Deposits / Average Savings Deposits
R_6	Total Interest (Dividend) Cost on Shares / Average Shares
R_7	Total Gross Income Margin / Total Average Assets
R_8	Total Operational (Overhead) Expenses / Total Average Assets
R_9	Total Loan Loss Provision Expense / Average Total Assets
R_{10}	Net Earnings / Average Total Assets
L = Liquidity	
L_1	[Total Liquid Cash Investments - Immediate Obligations] / Savings Deposits
L_2	Corporate (CFF) Liquidity Reserves / Savings Deposit
L_3	[Cash on Hand + Checking Accounts] / Total Assets
S = Signs of Growth	
S_1	Growth in Total Assets
S_2	Growth in Loans
S_3	Growth in Deposits
S_4	Growth in Shares
S_5	Growth in Institutional Capital
S_6	Growth in Membership

Source: David C. Richardson (WOCCU Advisor's workshop).

[14] The discussion of the PEARLS ratio is based on "The PEARLS Ratings System Instructions" by David C. Richardson, WOCCU Advisor's workshop, June 21-25, 1993.

Table 12: Average PEARLS Ratios Obtained for Niger CUs

Ratio	1990 (N=5)	1991 (N=5)	1992 (N=11)	1993 (N=20)	1994 (N=37)
P1	0.00	0.00	0.00	0.00	0.00
P2	0.00	0.00	0.00	11.53	0.73
E1	0.00	0.00	3.67	4.94	28.46
E4	71.92	78.20	72.99	69.66	48.76
E5	35.24	50.64	51.37	48.78	56.69
E7	18.04	14.38	12.59	11.12	6.68
E8	0.00	96.18	28.76	27.09	5.38
A1	0.00	0.00	10.19	11.04	10.51
A5	83.88	73.80	72.57	60.19	55.63
R1	0.00	0.00	16.65	19.30	53.39
R2	0.00	0.02	3.13	0.25	0.21
R5	0.00	0.00	2.76	0.00	0.00
R7	2.00	2.20	2.45	9.72	11.63
R10	37.28	0.26	15.05	11.45	12.62
L1	238.78	169.90	159.48	146.21	97.70
L3	55.80	52.00	49.98	35.34	26.48
S1	0.00	45.14	17.08	34.11	141.71
S2	0.00	0.00	0.00	12.05	478.05
S3	0.00	113.84	16.99	57.47	182.18
S4	0.00	10.24	3.75	4.92	27.69
S5	0.00	-100.48	212.37	6.79	213.55
S6	0.00	11.04	3.39	5.13	27.68

Source: WOCCU/Niger data base.

P: Protection Ratios

P_1 (Provision for Loan Losses/Delinquency>12 months) measures the credit union's ability to absorb losses. This ratio evaluates the effects of default on the CU. Since P_1 is concerned with loans delinquent for more than 12 months; i.e., those having the highest risk of default, the provision should be a minimum of 100 percent. Credit unions in Niger have no delinquent loans over 12

months, and thus P_1 was not applicable to the movement. Another ratio that measures the CU's ability to absorb losses, and is applicable to the Niger movement is P_2 (Provision for loan losses/Total Delinquency). Although not a key ratio, P_2 which takes into account total delinquency should ideally be 35 percent. Niger CUs did not start provisions for loan losses until 1993 and only a few CUs do make provisions. Thus, the ratio remains inadequate at 0.73 in 1994 to cover potential losses and has even decreased from its level of 11.53 in 1993.

E: Effective Financial Structure Ratios

E_1 (Loans/Total Assets), E_5 (Deposits/Total Assets), and E_8 (Institutional Capital/Total Assets) measure the composition of the most important accounts on the CU's balance sheet. E_1 measures the percentage of total assets that are invested in net loans; i.e., total loans minus loan loss reserves. If a CU is to generate adequate income and still remain sufficiently liquid, this ratio should be a minimum of 50 and a maximum of 70 percent (according to the Niger CUs loan policy). E_1 is still relatively small in the Nigerien movement (28.46 percent in 1994) but has seen a rapid growth from 3.67 percent in 1992 when the CUs starting granting loans to their members.

E_5 measures the percentage of total assets that are financed by savings. The goal is a ratio between 70-80 percent. E_5 is also below the target at 56.69 percent in 1994 implying that the CUs still need to put more efforts in savings mobilization.

E_8 measures the percentage of total assets that are financed by institutional capital; i.e., retained earnings and current surplus (net income). The goal here is to have a minimum of 10 percent. E_8 has been decreasing over the years to 5.38 in 1994, which is below the targeted minimum.

A: Asset Quality Ratios

A_1 (Total Loan Delinquency/Total Loan Portfolio) measures the total percentage of loan delinquency in the loan portfolio. This measure uses outstanding delinquent loan balances rather than only delinquent loan payments. It gives a more accurate measure of the overall risk to the CU and helps deal with repayment problems before they become "real" problems. A_1 should ideally be at less than 1 percent and was 10.51 in the Niger CUs in 1994. Although that ratio has remained almost constant over the years, it is still too high compared to the ideal goal and in fact reinforces the need for adequate loan loss provisions.

R: Rates of Return and Costs Ratios

R_7 (Total Gross Income Margin/Total Average Assets) and R_{10} (Net Earnings/Average Total Assets) measure the average income yields for the productive assets in the balance sheet. R_7 measures the total income margin generated before subtracting overhead expenses, loan loss provisions, and other extraordinary items. R_7 has seen an increase from 2.0 in 1990 to 11.63 in 1994 as a result of income margin increasing over total assets and an indication that the CUs' increasing ability to generating sufficient income to cover operational (overhead) expenses.

R_{10} measures the adequacy of CU earnings and its capacity to build up institutional capital. The goal of the CU is to generate a ratio that allows the institution to attain the goal of E_8 (Institutional capital/Total assets). R_{10} of 12.62 percent was recorded in 1994 indicating decent net earnings by the CUs in Niger.

L: Liquidity Ratios

L_1 (Total Liquid Cash Investments-Immediate Obligations/ Savings Deposits) measures the adequacy of the CU's liquid cash reserves to satisfy savings withdrawal requests, after paying all immediate obligations due in 30 days or less. The goal is to obtain a ratio L_1 of at least 20 percent. L_1 has been decreasing from 138.78 percent in 1990 to 97.70 percent in 1994 which indicates more than adequate liquid cash reserves. However, this is an indication that CUs in Niger have invested only a small portion of savers' deposits.

S: Signs of Growth Ratios

S_1 (Growth in total assets) measures the growth of total assets from one year to the next. It should ideally be greater than the inflation rate which was 8-15 percent for 1990-1993 and more than 30 percent for 1994 due to the effect of the currency devaluation. S_1 has always been above the inflation rate in the Niger CUs since 1991 and shown tremendous growth of 141.7 percent between 1993 and 1994.

Other indicators of growth are S_2 (Growth in Loans) and S_3 (Growth in Deposits) which measure the percentage growth of both loans and savings deposits from one year to the next. Both are essential to the long run viability of the CU. S_2 measures loan growth and should be greater than the inflation rate. S_2 has grown from 12.04 in 1993 to 478.05 percent in 1994 indicating the tremendous growth in loans seen at the CUs. S_3 measures savings growth from one year to the next. Here too, the CU's goal should be an amount greater than the inflation rate. S_3 was at 182.17 percent in 1994 due mainly to the creation of several new CUs and an increasing membership base.

These PEARLS ratios reveal that the CUs in Niger need to increase their provision for loan losses, put more efforts on savings mobilization despite decent earnings. There is also too much liquidity that needs to be invested. However, investment opportunities in Niger are limited for the CUs. There are no government treasury bills and investment of excess liquidity in commercial bank deposit instruments does not provide an adequate return. The only real option, although still a project, remains the CFF which would allow surplus-units CPECs to place their excess funds in the CFF, in return for an adequate yield on their placements. At this stage of the growth of the Niger CUs, the PEARLS ratios do not reflect the complete image of the financial viability of the institutions and should be viewed with caution.

b . Niger CUs PEARLS Composite Scores

PEARLS composite scores are obtained as an average of each P, E, A, R, L, S, that apply to the credit union. The scores were calculated for the years 1990-1994 for the 37 CPECs and are presented in Table 13. A good performing CU should have a composite PEARLS score less or equal

to two. For all 37 CUs operating in Niger December 1994, scores are in the 2-2.5 range. Composite score by department ranged from 2.2 to 3.5 for Zinder, 1.9 to 3.5 for Maradi, and 1.9 to 2.6 for Niamey, and 2.4-2.5 for Kollo and Tillabery regions (Table 13). Although, the overall score is greater than two for the Nigerien CUs, that should not be a reason for concern given the very young age of these institutions. A more urgent problem is for the management to ensure that the CU maintains a neutral behavior, i.e., treats borrowers and savers such that both member groups are equally benefited.

Table 13: Composite PEARLS Scores for Credit Unions in Niger

Credit Union	12-31-90	12-31-91	12-31-92	12-31-93	12-31-94
The Zinder Region					
Ainahi	--	--	--	3.08	2.93
Batuntuma	--	--	2.46	2.30	2.93
Dan Balhadi	--	--	2.50	2.33	2.23
Darnako	--	--	--	2.50	2.23
Galadima	2.50	2.40	3.47	2.33	2.80
Hakinni Dan Hajara	2.50	2.13	2.23	2.73	2.83
Huddu Haushi	--	--	--	--	2.42
Kaura	--	--	--	2.67	2.70
Kullu	2.50	2.23	2.73	3.13	3.50
Mahaman Bacira	--	--	2.50	2.70	3.10
Mahaman Kunkuru	--	--	2.50	2.70	3.10
Tadali	2.38	2.33	3.101	3.7	3.20
Tarana	2.38	2.23	3.17	3.10	2.73
Yal Ware	--	--	2.42	2.30	3.07
The Niamey Region					
Adaka Albarkanta	--	--	--	--	2.08
Bon Jaré	--	--	--	--	2.25
Bonkanay	--	--	--	--	2.00
Diyauci	--	--	--	--	2.25
Solidarité	--	--	--	--	2.42
Yancin Kai	--	--	2.07	2.58	2.00

Yuni No Gomni	--	--	--	--	1.92

Table 13: Composite PEARLS Scores for Credit Unions in Niger (continued)

Credit Union	12-31-90	12-31-91	12-31-92	12-31-93	12-31-94
The Maradi Region					
Anfanin Kai	--	--	--	2.04	2.63
Anfanin Katsina	--	--	--	--	2.46
Anfanin Kowa	--	--	--	2.50	2.83
Dadin Kowa	--	--	--	--	2.13
Dan Kurma	--	--	--	--	2.04
Hangen Nesa	--	--	--	2.50	2.37
Karuwa	--	--	--	--	2.38
Mitinci	--	--	--	--	2.33
Tarmamuwa	--	--	--	--	3.00
Tattalin Jamaa	--	--	--	--	2.13
Timidria	--	--	--	2.13	2.57
Yado	--	--	--	--	3.46
Zakut	--	--	--	2.50	1.97
The Kollo and Tillabery Regions					
Suji Ma Zumbu	--	--	--	--	2.40
Gomni	--	--	--	--	2.50

Source: WOCCU/Niger data base.
-- Not applicable.

D. THE THEORETICAL FRAMEWORK OF A CREDIT UNION

A theoretical framework that takes into account CUs' unique characteristics has been developed by Smith, Cargil, and Meyer (1981). The model is based on two fundamental requirements. First, the specification of the objective function that focusses on the value of CU participation to members. Second, the analysis explicitly considers the possibility of conflict among members, and the resolution of that conflict being a preference to either the borrowers or savers. Smith et al's model is an extension of a previous work by Taylor (1971) and Flannery (1974) to

show the different output decisions for four behavioral motivations: profit maximization, borrower domination, saver domination, and neutrality.

Under a riskless environment assumption, the generalized objective function is:

$$\underset{r_L, r_S}{Maximize} \quad \lambda\, NGL + \sigma\, NGS + \pi \tag{1}$$

Subject to:

A balance sheet constraint:

$$L - S = D \tag{2}$$

A non-negative operating surplus constraint:

$$\pi = r_L L - r_S S - r_{DM} D - C_L L - C_S S - \bar{E} \geq 0 \tag{3}$$

Linear specifications of loan demand and savings supply schedules are:

$$L = \alpha(r_{LM} - r_L), \qquad \alpha > 0 \tag{4}$$

$$S = \beta(r_S - r_{SM}), \qquad \beta > 0 \tag{5}$$

The Net Gain on Loans (**NGL**) is the value to the borrower and is represented by the difference between the CU loan rate, r_L and the best alternative market rate, r_{LM}, times the level of loan activity L. The Net Gain on Savings (**NGS**) is represented by the difference between the CU dividend rate on savings r_S, and the best alternative market rate available r_{SM}, times the level of savings S. The weighting parameters λ and σ are used to deal with the issue of saver vs. borrower-dominated as well as neutral credit union.

L is the level of loans ($L \geq 0$), S is the level of share deposits ($S \geq 0$), and $D \geq \leq 0$ is the level of debt issued if L > S (e.g. borrowing from a central liquidity facility) or is the level of money market investment if L < S.

The nonnegative operating surplus (π) is what is available for distribution to members as an interest rebate on loans or a bonus dividend on savings. It takes into account the exogenous rate $\mathbf{r_{DM}}$ which is assumed to be the same irrespective of whether D is a debt issue (D>0) or investment (D<0). The average cost of processing loans is $\mathbf{C_L}$, and $\mathbf{C_S}$ is the average cost of servicing savings accounts. Both costs are assumed to be constant. $\bar{\mathbf{E}}$ is defined as the sum of all fixed expenditures. This includes the cost of renting capital equipment, building space and any other costs associated with providing non-financial services to members.

The linear specifications of loan demand schedule (4) and savings supply schedule (5) are used to complete the model. Equation (4) says that the quantity of loans demanded is proportional to the spread between the CU loan rate, r_L, and the best alternative market rate r_{LM}. The market rates r_{LM}, and r_{SM} are exogenously determined.

The expanded form of the constrained optimization problem becomes:

$$\underset{r_L,\, r_S}{Maximize} \quad \lambda\, L(r_{LM} - r_L) + \sigma\, S(r_S - r_{SM}) + [r_L\, L - r_S\, S - r_{DM} \tag{6}$$

Subject to:

$$\pi = r_L\, L - r_S\, S - r_{DM}\, D - C_L\, L - C_S\, S - \bar{E} \geq 0 \tag{7}$$

$$\alpha(r_{LM} - r_L) - \beta(r_S - r_{SM}) = D \qquad \alpha, \beta > 0 \tag{8}$$

The CU chooses the optimal loan and dividend rates, r_L^* and r_S^*, to maximize a function of the total net gain available to its membership subject to the non-negative surplus constraint and balance sheet constraint. The model assumes that the parameters λ and σ are scaled such that their values fall between zero and one under the different cases of profit maximization, borrower domination, saver domination, and neutrality between borrower and saver interests.

(a) **Profit maximization** ($\lambda = 0, \sigma = 0$)

The CU maximizes the surplus to be distributed (retained) irrespective of the value of transactions to members. In this case the optimal rates are:

$$r^*_S = \frac{r_{DM} + r_{SM} - C_S}{2} \tag{9}$$

$$r^*_L = \frac{r_{LM} + r_{DM} + C_L}{2} \tag{10}$$

The maximum surplus becomes:

$$\pi^* = \frac{(r_{LM} - r_{DM} - C_L)^2 + \beta(r_{DM} - r_{SM} - C_S)^2}{4} - \bar{E} \tag{11}$$

It should be noted that expression (11) places a ceiling on $\bar{E}$, since $\pi^* \geq 0$.

(b) Complete **borrower-domination** ($\lambda = 1, \sigma = 0$).

Gains to borrowers carry a greater weight in the overall objective function than gains to savers. The CU surplus is used to subsidize the lowest loan rate and maximum loan level possible. The optimal rates will be as follows:

$$\frac{r_{DM} + C_L}{2} - \frac{r_{DM} - r_{SM} - C_L}{2}.[\ 1 + \frac{\beta(r_{DM} - r_{SM} - C_S)}{\alpha(r_{LM} - r_{DM} -} \tag{12}$$

$$r^*_S = \frac{r_{DM} + r_{SM} - C_S}{2} \tag{13}$$

It should be noted that in this case the objective function becomes a simple maximization of NGL + π. Also the non-negative surplus constraint is binding, i.e., $\pi^* = 0$.

(c) Complete **saver-domination** ($\lambda = 0$, $\sigma = 1$).

The CU surplus is used to pay the highest possible dividend rate and have the greatest savings level possible. Here, as with the borrower-dominated case, the surplus constraint is binding at $\pi^* = 0$. The optimal rates are:

$$r^*_L = \frac{(r_{LM} + r_{DM} + C_L)}{2}$$

$$= \frac{r_{DM} + r_{SM} - C_S}{2} + \frac{r_{DM} - r_{SM} - C_S}{2}\ [1 + \frac{\alpha(r_{LM} - r_{DM} - C_L)^2 - 4}{\beta(r_{DM} - r_{SM} - C_S)^2} \tag{15}$$

(d) **Neutrality** ($\lambda = 1$, $\sigma = 1$)

The CU's objective is to maximize the total gain to its borrowers and savers. The surplus is distributed equally between lower interest costs to borrower and higher dividend rates to savers. With a binding surplus constraint ($\pi^*=0$), the optimal rates are:

$$\frac{r_{DM} + C_L}{+\ 2} - \frac{r_{LM} - r_{DM} - C_L}{2}\ .\ [1 - \frac{4\bar{E}}{\alpha(r_{LM} - r_{DM} - C_L)^2 + \beta(r_{DM} - r} \tag{15}$$

$$\frac{r_{SM} - C_S}{2} - \frac{r_{DM} - r_{SM} - C_S}{2}\ .\ [1 - \frac{4\bar{E}}{\alpha(r_{LM} - r_{DM} - C_L)^2 + \beta(r_{DM} - r_{.}} \tag{16}$$

If $\bar{E}$ (the expenditure on fixed costs, other member services, or retained earnings) is set to its maximum rate, then the optimal rates reduce to the surplus or profit maximizing rates of case a.

Smith et al. argue that there are good reasons to believe that a CU would usually adopt the equal treatment case, i.e., maximize the total gains to both borrowers and savers, especially if the membership is equally distributed between savers and borrowers. In a neutral CU, savers will be paid a rate of interest on savings deposits that is higher than the rate paid in the profit maximizing CU, and borrowers will be paid a rate on loans that is lower than that of a profit maximizing CU. Also, the loan rate for a borrower oriented CU will be less than a neutral CU and the dividend rate will also be less than the one prevailing in a neutral CU. In a saver-dominated CU, both the loan rate and the dividend rate will be more than in a neutral CU. Thus, a borrower-dominated CU will issue more debt or invest less than if equal treatment were the norm; and a saver-oriented CU will issue less debt or invest more than in a neutral CU.

E. AN EMPIRICAL MODEL FOR THE NIGER CU MOVEMENT

Empirical test of the Smith et al. model by Patin and McNiel (1991) revealed that the majority of CUs in the USA exhibited relatively balanced behavior, although some CUs exhibited tendencies towards saver-dominated or borrower-oriented behavior. Results further indicated that occupational CUs have a significantly stronger saver-orientation than either associational or residential CUs, while associational CUs exhibit almost perfect neutrality between borrowers and savers. Both of these results imply that member group domination is an important feature of CU behavior and that empirical tests of CU behavior should take member group domination into account. However, Patin et al. conclude that the economic justification of the CU movement was enhanced by the fact that neutrality was the most prevalent type of behavior identified.

1. The Empirical Model and Data

Application of Smith et al. theoretical framework is not always possible in developing countries where markets are fragmented and incomplete. Poyo (1986) tested a modified version of the Smith et al. model for the purpose of testing it in a developing country environment, i.e. Honduras. The purpose of empirically testing the behavior of a CU movement like the one in Niger is to find out which indicators of future financial stability would remain the same or change in the future as well as the direction of the change when it occurs. The following model for Niger CUs[15] is an adaptation of Poyo's (1986) model developed for CUs in Honduras itself derived from the Smith et al. theoretical framework and adapted to a developing country setting. Poyo estimated a simultaneous seven-equation model that included three savings supply equations, three price setting equations, and a loan rationing equation. Due to the nature of the Niger data and environment, the present empirical model will include only one savings supply equation and one loan rationing equation to be solved simultaneously in a system. The model derived below assumes that CUs in Niger operate in highly imperfect and fragmented financial markets.[16] Access to formal financial

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[15] This model is a revised formulation of a model by Shaw (1995) for Nigerien credit unions.

[16] See Chapter Five for empirical evidence of the fragmentation of Niger financial markets.

services by the rural population is non-existent or limited at best. People in rural areas have to rely almost exclusively on the informal financial intermediaries of friends, relatives, money-keepers and money-lenders. The model is the following:

$$= \alpha_0 + \alpha_1 LSRATIO + \alpha_2 NLMB + \alpha_3 MBSIZE + \alpha_4 FEM$$
$$\alpha_5 RMARADI + \alpha_6 UMARADI + \alpha_7 RZINDER + \alpha_8 UZIN \quad (17)$$

$$IO = \beta_0 + \beta_1 SAMT + \beta_2 NLMB + \beta_3 MBSIZE + \beta_4 INTR$$
$$\beta_5 AGE + \beta_6 SALARYM + \varepsilon_2 \quad (18)$$

where the Greek characters α_i, and β_i, are the coefficients associated with each variable i, and ϵ_i are the error terms associated with each equation. The data is a cross-sectional time-series data (1990-1994) obtained from WOCCU-Niger for all 37 CPECs. Quarterly data were used for all quantitative variables used in the regression.

The dependent variables:

SAMT is the real[17] stock of savings deposit amount at the end of each quarter.

LSRATIO is the outstanding loan/savings ratio. It is the maximum loan size members can obtain as multiple of their deposit account balance.

The independent variables:

(i) Quantitative variables:

NLMB is the number of loans received per member.

MBSIZE is the membership size.

FEMALE is the percentage of female members in the organization.

AGE is how long the CU has been in operation. It is expressed in months.

INTRATE is the effective interest rate charged on loans by the CU. It takes into account the nominal (stated) rate of interest, loan transaction costs such as application fees, and the CU loan multiple policy.[18] Using an effective interest rate captures the effective cost associated with the

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[17] The deflator used is the Consumer Price Index (CPI).

[18] The stated nominal annual rate of interest is the same for all credit unions (24 percent) as is the loan multiple (2:1). Only the loan application fee varies among CUs (from 0 - 3 percent). The effective rate of interest is estimated using a formula developed by Poyo (1990) to analyze the Dominican Republic's CU movement. The formula is:

$$R_E = \frac{(R_N + T_C - I_S\phi)}{(1 - \phi)}$$

where: R_E = The effective interest rate charged on loans
R_N = The stated nominal rate of interest on loans

credit union policy of loan amounts, as a multiple of the individual's savings account balance. Expected interest on savings (I_S) is ignored, since no CUs have established fixed rates on savings. Using the formula in the footnote, and given a nominal rate of interest of 24 percent, a loan multiple of 2:1, and transaction costs between 0 - 3 percent, a range of effective interest rates of 48 to 52 percent was obtained the CUs in Niger. This is an indication that CU members are willing to and able to pay high interest rates to secure a loan, given that their only other alternative is the informal financial market where the rates could be substantially higher. This could also give an indication that the Niger CUs are probably not borrower-dominated at this point because borrowers would have used their influence to push the rate down otherwise.

(ii) Dummy variables:
RMARADI indicates whether the CU is located in rural Maradi.
UMARADI indicates whether the CU is located in urban Maradi.
RZINDER indicates whether the CU is located in rural Zinder.
UZINDER indicates whether the CU is located in urban Zinder.
SALARYM indicates whether the CU manager receives any salary.

In the savings supply equation, the real average stock of savings deposit amount (SAMT) is expected to be positively related to the loan/savings ratio (LSRATIO), the average number of loans per member (NLMB), total membership size (MBSIZE), and the percentage of female members in the organization (FEMALE). Dummy variables used to capture both regional differences and urban/rural effects are expected to be positively related to SAMT for the two urban variables UMARADI and, UZINDER, while the two rural variables RMARADI, and RZINDER are expected to have negative signs. The positive signs on the urban regional variables are supposed to capture the overall greater total wealth found in urban regions. The percentage of women members (FEMALE) illustrates the significance of women's regular savings habits on CU asset accumulation. Previous research in Niger indicated that women are more likely to participate in rotating savings and credit associations than men (Graham et al., 1987). Regular savings habits developed through participation in local ROSCAs carry over into women's savings habits in CUs. Women are more likely to be net savers and demand smaller and shorter term loans than men.

In the loan rationing equation, the loan to savings ratio (LSRATIO) reflects the loan multiple policy in the CU. Thus, for a positive relationship between LSRATIO and members' savings (SAMT), an increase in savings deposits must be reflected by an increase in larger loans to members. If the increase in larger loans is less than the increase in savings, a negative relationship will be observed. The average number of loans per saver (NLMB) is expected to be positively related to LSRATIO because if, as assumed, people join CUs to ensure future access to credit then the greater the chance of receiving a loan, the more loans will members be demanding.

T_C = The explicit transactions costs as a percentage of the loan amount
I_S = The expected interest rate on savings paid by the credit union
ϕ = One over the loan multiple

An increase in the effective interest rate charged on loans (INTRATE) would tend to reduce the demand for loans and with it the supply of shares or savings, since they represent an implicit demand for loans. However, INTRATE will be positively related to LSRATIO if the rise in interest rate is not reflected by a decrease in savings because people will save under any conditions including negative interest rates paid on deposits. The AGE of the CU expressed in months is expected to be positively related to LSRATIO if loan multiple changes, i.e., increases over time. A negative relationship will be observed otherwise. The dummy variable (SALARYM) indicates whether or not the manager of the CU received any salary. SALARYM reflects the incentive given to the management and is expected to be positively related to LSRATIO. It is expected that paid management will increase both the number and amounts of loans granted and increase the credit union's ability to manage reimbursements. In general paid management has gone through several training sessions and has been on the job for at least six months. The salary incentive to do the best job possible will result in higher loans to savings ratios and, therefore, more profitable CU.

2. Estimation Results

The simultaneous two-equation model is estimated by the two-stage least square (2SLS) procedure using quarterly data available for all 37 credit unions since 1990 for the oldest CUs to one quarter for the three youngest CUs. There is a total of 260 data points or observations. The variables used in the estimation are defined in Table 14. The unbalanced nature of the cross-sectional time-series data set makes the presence of autocorrelation very likely. However, attempts to correct for the suspected autocorrelation remained unsuccessful due to the small sample size for individual credit unions. A larger sample that includes an additional 12-20 quarters is needed to successfully use this procedure. A model with autocorrelation will still give unbiased estimators.

Table 14: Description of Variables Used in Regressions

Variable	Description and Measurement Unit	Mean	Standard Deviation
SAMT	Stock of savings deposits in FCFA	FCFA 1,312,232	2110361
LSRATIO	Loan to savings ratio	FCFA 18.65	28.59
NLMB	Number of loans per member	0.11	0.34
MBSIZE	Average membership size	109.70	72.02
FEMALE	Proportion of female membership in percent	31.51	35.87
RMARADI	Dummy for rural Maradi CU	0.15	0.36
UMARADI	Dummy for urban Maradi CU	0.07	0.26
RZINDER	Dummy for rural Zinder CU	0.58	0.49
UZINDER	Dummy for urban Zinder CU	0.08	0.28
INTRATE	Effective interest rate	23.48	25.03

AGE	Number of months the CU has been in operation	17.39	14.72
SALARYM	Dummy for paid management	0.43	0.50

Source: WOCCU/Niger data base.

The results of the simultaneous equation system are presented in Tables 15 and 16 and show good individual R-squares and adjusted R-squares of 0.63 and 0.62, and 0.54 and 0.53, respectively, for the savings supply and loan rationing equations. All but one variable are significant in the savings supply equation, while all variables in the loan rationing equation are significant at either one or 10 percent level. The results of the savings supply equation in Table 12 show that, as expected, the loan to savings ratio (LSRATIO), the average number of loans per member (NLMB), the total membership size (MBSIZE), the percentage of female members (FEMALE), and the dummy variables (RMARADI, RZINDER, and UZINDER) representing rural credit unions in the Maradi and Zinder regions, and urban credit union in the Zinder region, all have the expected signs and are significantly related to the amount of mobilized savings deposits. All variables are significant at the 1 percent level.

Table 15: 2SLS Estimation Results of the Savings Supply Equation

Variable	Parameter	Parameter Estimate	t-statistic
Constant	α_0	-617667*	-1.74
LSRATIO	α_1	13641**	2.26
NLMB	α_2	1092762***	3.21
MBSIZE	α_3	18354***	12.00
FEMALE	α_4	6511.7***	2.43
RMARADI	α_5	-1517504***	-3.65
UMARADI	α_6	-986677	-0.22
RZINDER	α_7	-899287***	-2.84
UZINDER	α_8	1205284***	2.76
R-Square	0.6330		
Adj R-Square	0.6213		

Source: WOCCU-Niger database.
Note: *, **, *** denote significance a the 10, 5, and 1 present level respectively.

Table 16: 2SLS Estimation Results of the Loan Rationing Equation

Variable	Parameter	Parameter Estimate	t-statistic
Constant	β_0	-9.284411***	-2.97
SAMT	β_1	-0.000004702***	-2.79
NLMB	β_2	17.480172***	3.74
MBSIZE	β_3	0.132389***	3.48
INTRATE	β_4	0.678425***	8.30
AGE	β_5	-0.209562*	-1.83
SALARYM	β_6	12.531164***	3.76
R-Square	0.5381		
Adj. R-Square	0.5272		

Source: WOCCU/Niger database.
Note: *, and *** denote significance at the 10 and 1 percent level respectively

These results indicate that increasing loans to members as is reflected in LSRATIO and NLMB will have a positive influence in increasing members deposits. Also, an increase in membership size (MBSIZE) naturally leads to a significant increase in savings deposits because all CU members are savers first. The female membership (FEMALE) also plays a positive influence on the total stock of deposits as expected. Women are known to make small but frequent deposits in the CU and to remain net savers in general. Credit unions located in rural areas of Maradi and Zinder departments (RMARADI, RZINDER) are shown to generate less savings than those in Niamey (the control dummy variable for department). This result is as expected given that Niamey is a wealthier area than both Maradi and Zinder. By comparison, UZINDER is shown to generate more savings than urban Niamey principally because CUs in Zinder are among the first established in the country and have a longer history of a well organized savings mobilization program.

The results of the loan rationing equation are presented in Table 16 and show that all variables are statistically significant at either one or 10 percent level. The negative relationship of the stock of savings deposits (SAMT) with the loans to savings ratio (LSRATIO) is an indication that the CU loan multiple policy does not match the increase in members savings. That is, the maximum loan size members can obtain as a multiple of their deposit account balance does not increase to reflect the increase in members' deposits, reflecting a very risk averse lending policy. The number of months the CU has been in operation is represented by the AGE variable which is significantly negatively related to LSRATIO indicating that CUs in Niger did not exploit their maximum loan potential with time. The effective interest rate (INTRATE) is positive and significant indicating that an increase in interest rate does not deter members from applying for loans. This may

be an indication that these rates are seen as competitive if the member-borrower compares them with alternative informal financial rates. Membership size (MBSIZE) and the proportion of female members (FEMALE) are positively significantly related to LSRATIO confirming the knowledge that more members and especially more female members positively influence the stock of savings which consequently increases the number and amount of loans granted. The incentive given to CU managers by paying them a salary is shown to be paying off with SALARYM positively and significantly related to LSRATIO. Paid management whose performance is reflected in their salary will consequently work hard at mobilizing savings as well as providing members with loans.

IV. CONCLUDING COMMENTS

Niger which is one of the poorest countries in the world faced artificial financial deepening in a declining economy, with very limited functions by the formal financial system. Semi-formal financial systems of credit unions and donor funded programs is in full effervescence, however. It is doubtful that targeted credit programs and guarantee funds programs with no savings mobilization objective are viable and will be sustainable in the long-run. The savings and loan programs like the WOCCU credit unions are undoubtedly the type of financial intermediation Nigériens need most as it stresses a savings mobilization-first approach and do not rely on donor funds for on-lending activities. With the proper prudential and regulatory framework, and a carefully monitored growth, credit unions in Niger could become the most important financial intermediaries, especially in the rural areas of the country which is not and would not be served by the formal system.

An investigation of the performance of the CU movement in the Nigerien financial markets has found the young movement to be healthy and rapidly growing as shown by PEARLS ratios and descriptive statistics. Membership has increased tremendously in part due to the creation of several new CUs every year and more importantly the renewed trust in the financial system. Services (savings and loans) have also been increasing although more emphasis needs to be placed on savings mobilization, as members are more concerned with a safe place to put their savings. In the future, rewarding savers a little more than what is actually done will create a larger pool of net savers and prevent the organization form being borrower-dominated. At this stage, the CUs in Niger seem to be neutral i.e. treating borrowers and savers equally and that orientation needs to be kept intact. Also, the creation of the CFF will offer an attractive investment alternative to surplus unit CPECs with too much liquidity and nowhere to place them and earn a decent return.

The econometric model results point to several elements that are at the core of the growing movement and will affect its future growth. Thus, women appear to be an important positive element in savings mobilization. Also, members value highly access to loans which potentiality is an incentive for saving with the institution. The use of market rates of interest on loans does not seem to deter members from borrowing from the CPECs instead of going to the local money lender. Using strictly members mobilized savings as loan sources instead of relying on external funds was crucial in determining the long term viability and sustainability of the CUs in Niger.

Generating larger loan portfolios will allow the CPECs to be financially self-sufficient. This can be accomplished by mobilizing more savings and increasing their outstanding loans to savings ratios. Successfully increasing the loan portfolios will also require that incentives (monetary compensation) be given to management to generate larger loan portfolios. This needs to be done even if a limited salary subsidy program is necessary.

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